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L22	L21 and network\$	15	L22
L21	L20 and report\$	16	L21
L20	L19 and (test near (data or information))	16	L20
L19	L18 and (patient near access\$)	60	L19
L18	L17 and (provider)	107	L18
L17	L16 and (patient near information)	132	L17
L16	healthcare near system	344	L16
L15	L14 and network	8	L15
L14	L13 and (test near information)	9	L14
L13	L12 and provider	100	L13
L12	L10 and (patient near (information or profile))	122	L12
L11	L10 and (patient near test) same (patient near (information or profile))	3	L11
L10	health near management	1087	L10
L9	L8 and (patient near test)	2	L9
L8	health near management near system	272	L8
L7	L6 and (patient near information)	2	L7
L6	L5 and network	3	L6
L5	L4 and (patient near test)	4	L5
L4	healthcare near management	99	L4
L3	L1 and (patient near test) same (patient near information)	1	L3
L2	L1 and (patient near test) same (patient near information) and (healthcare near provider)	1	L2
L1	healthcare near management near system	36	L1

END OF SEARCH HISTORY

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L7: Entry 1 of 2

File: PGPB

Jun 5, 2003

DOCUMENT-IDENTIFIER: US 20030105649 A1

TITLE: Automated data reporting system and method

Abstract Paragraph (1):

An automated data reporting system collects, stores, analyzes, and reports health related data. The system includes a processor, a memory device coupled to the processor, a communication device coupled to the processor and the memory device, that enables communication via the communication network, a relational database that is stored and updated in the memory device, and an application program that is executed by the processor from the memory device. The application program includes first code, responsive to a query from a provider device via the communication device that instructs the communication device to send a data entry form to the provider device, second code, responsive to receiving a completed data entry form from the provider device, that stores data from the data entry form into the database, third code, responsive to receiving the completed data entry form from the provider device, that notifies a healthcare provider communication device of errors, and fourth code that instructs said communication device to transmit a summary of said data to a receiving agency.

Summary of Invention Paragraph (2):

[0002] The invention generally relates to interactive and automated reporting of data and, more particularly, relates to systems and methods for collection, analysis, and reporting of health related data, such as trauma patient information, over a network, such as the Internet.

Summary of Invention Paragraph (7):

[0006] In an exemplary trauma reporting system in the State of Texas, the Texas Department of Health divides the state into regions. More specifically, TDH divides the State of Texas into twenty-two regions for trauma management. Each region acts within the auspices of a Regional Advisory Council (RAC) for the region, established by the TDH, which has responsibility to maintain quality healthcare management and comprehensive reporting to the state regarding the respective region's trauma care and activities. The RAC receives trauma data from providers, such as emergency medical services (EMS), emergency rooms, hospitals and others. The RAC, collects the health related data and forwards it to the state agency. The RAC also receives various information from the state agency.

Summary of Invention Paragraph (11):

[0009] An embodiment of the invention is a method for reporting health related data over a communication network. The method includes steps of accessing a server device of the communication network, providing to a provider device a uniform format for entering the data, receiving the data from the provider device, and storing the data.

Summary of Invention Paragraph (12):

[0010] Another embodiment of the invention is a method for trauma data reporting over a communication network. The communication network is the Internet. The method includes steps of providing a database. The database serves to relate queries with preprogrammed responses in the form of data entry forms and stores information entered into the data entry form. The method also includes steps of delivering a query to the database over the communication network, accessing an interactive graphical interface relevant to the queries, inputting data, and storing the data in the database.

Summary of Invention Paragraph (13):

[0011] Yet another embodiment of the invention is a system for the collection, storage, analysis, and reporting of health related data. The system includes a processor, a memory device coupled to the processor, a communication device coupled to the processor

and the memory device, that enables communication via the communication network, a relational database that is stored and updated in the memory device, and an application program that is executed by the processor from the memory device. The application program includes first code, responsive to a query from a provider device via the communication device that instructs the communication device to send a data entry form to the provider device, second code, responsive to receiving a completed data entry form from the provider device, that stores data from the data entry form into the database, third code, responsive to receiving the completed data entry form from the provider device, that notifies healthcare provider communication device of errors, and fourth code that instructs said communication device to transmit a summary of said data to a receiving agency.

Detail Description Paragraph (2):

[0017] Referring to FIG. 1, a system 2 for automated data reporting includes a communications network 4, such as the Internet. The communications network 4 includes various server and client devices, interconnected for communication over wire, wireless, other communications channel, or combinations thereof. Within the network 4, a server 6, for example a server computer, is connected with various other computing and communication devices. The server 6 maintains, either on the server 6 or associated with the server 6 for access through the server 6, a database of information, for example, trauma event data. The database is, for example, an Oracle, SQL, or other conventional relational database capable of storing data and yielding appropriate responses to queries.

Detail Description Paragraph (3):

[0018] The other computing and communications devices connected to the server 6 include, for example, at least one provider device 8a, 8b and, a receiver device 10. The provider device 8a, 8b is electronic communications equipment capable of communicating with the server 6 over the network 4. The provider device 8a, 8b is, for example, a computer, an Internet-enabled telephone, a personal digital assistant (PDA), or some other similar device capable of communicating either over wireline, wireless, other channel, or combinations of channels. The receiver device 10 is a similar communications device, for example, a personal computer or mainframe computer. The network 4, and communications among the server 6, the provider device 8a, 8b, and the receiver device 10, can be formatted to communicate according to any of a variety of communications protocols; however, if the network 4 is the Internet, then the devices will most likely comply with the transmission control protocol/Internet protocol (TCP/IP) or some similar variant and communicated information can take the form of web pages, such as those conforming to HTML or XML standards.

Detail Description Paragraph (4):

[0019] Also included within the network 4 can be various other network communications devices, such as at least one third party device 14 and at least one agent device 12. The third party device 14 is representative of any of a multitude of available devices that can communicate over the network 4 with the server 6. The third party device 14 is able to receive and display to a user various information made available to the third party device 14 by the server 6, over the network 4. The third party device 14 is allowed limited access to information saved at or in connection with the server 6, as dictated by the server 6 and the security implementations desired by the operator of the server 6.

Detail Description Paragraph (5):

[0020] The agent device 12 communicates with the receiver device 10 or, alternatively, communicates with the server 6. The agent device 12 communicates with the server 6 over the network 4 and, alternatively or additionally, communicates with the receiver device 10 over the network 4 or over a point-to-point or other proprietary communication connection between the agent device 12 and the receiver device 10. The agent device 12 is able to view information made available to it by the receiver device 10 or the server 6, as the case may be. The available information to the agent device 12 is determined by the restrictions and security mechanisms of the server 6 and the receiver device 10, as well as the particular communications channel and limitations between the agent device 12 and the server 6 or the receiver device 10, as the case may be. Referring to FIG. 2, a method 40 of operation of the provider device 8a, 8b (shown in FIG. 1) commences with a step 42. In the step 42, the provider device 8a, 8b accesses the server 6 by initiating communications under the particular protocol, such as TCP/IP. The step of accessing 42 occurs via communications over the network 4 between the provider device 8a, 8b and the server 6.

Detail Description Paragraph (6):

[0021] In a step 44, the provider device 8a, 8b receives information, for example, an Internet web page, served to the provider device 8a, 8b over the network 4. The information received by the provider device 8a, 8b in the step 44 is stored on the server 6. After the provider device 8a, 8b accesses the server 6 in the step 42, the provider device 8a, 8b and the server 6 continue communications according to the protocol of the network 4. In the case where the protocol is TCP/IP and the information being served is a web page, the provider device 8a, 8b receives the information and displays it to a user of the provider device 8a, 8b.

Detail Description Paragraph (7):

[0022] At the provider device 8a, 8b, the user inputs data in a step 48. This input of data in the step 48 can, for example, include trauma patient information, patient condition parameters and measurements, and other trauma statistics and data. The data is input in the step 48 directly to the provider device 8a, 8b by the user, either into an active web page, text form, or other form or format. The form or format of the data entry in the step 48 is, in any event, dictated by the programmed requirements for such data, so that the data can be received and manipulated by the server 6.

Detail Description Paragraph (8):

[0023] In connection with the step 48 of inputting data by the provider device 8a, 8b, the user of the provider device 8a, 8b must collect the particular data in a step 46. The data is collected in the step 46 in conventional manner, such as by a human healthcare treatment doctor or other provider after performing conventional medical tests on a patient and making appropriate health condition observations. In the case of trauma registry, the conventional manners of collection include all conventional medical procedures administered to trauma patients to detect physical characteristics of the patient and to provide early and emergency trauma treatments.

Detail Description Paragraph (9):

[0024] In a step 50, the data input by the provider device 8a, 8b is transferred by the provider device 8a, 8b to the server 6. The data is transferred in the step 50 according to the communications protocols of the network 4.

Detail Description Paragraph (10):

[0025] Referring to FIG. 3, a method 60 of operation of the receiver device 10 (shown in FIG. 1) commences with a step 62. In the step 62, the receiver device 10 accesses the server 6 over the network 4. This accessing communication of the receiver device 10 to the server 6 proceeds according to protocols of the network 4. The receiver device 10 can access the same or, most likely, portions of the information or even different information from the server 6, than the information that is so accessible to the provider device 8a, 8b. In particular, the receiver device 10 can be restricted to only receive information from the server 6, rather than permitted to input information to the server 6 for storage. Furthermore, the information available to the receiver device 10 can be a subset or compilation of information at the server 6, as dictated by the programming of the server 6.

Detail Description Paragraph (12):

[0027] Referring to FIG. 4, a method 80 is performed by the server 6. The method 80 commences with a step 82 of receiving an accessing communication and serving up information, for example, a web page, to the device, for example, the provider device 8a, 8b which accesses the server 6. The server 6 communicates the web page or other information over the network 4 to the provider device 8a, 8b. The information is communicated over the network 4 according to the network 4 protocols, such as TCP/IP.

Detail Description Paragraph (13):

[0028] In a step 84, the server 6 receives data from the provider device 8a, 8b. The data received by the server 6 from the provider device 8a, 8b is the input made by the user of the provider device 8a, 8b. The input data is, for example, trauma data information. The data received by the server 6 from the provider device 8a, 8b in the step 84 is communicated over the network 4 to the server 6 and conforms to the network 4 protocols.

Detail Description Paragraph (15):

[0030] In a step 88, the server 6 can, alone or in association with other computing devices, compile the data. The step of compiling 88 can include such activities as formatting the data, organizing the data, manipulating the data, which includes such activities as statistical analyses and accounting transactions, and other data compilation activities. Of course, those skilled in the art will readily know and understand that the step of compiling 88 the data will depend upon the desired result

of information to be made available by the server 6 to devices in communication with the server 6 over the network 4.

Detail Description Paragraph (18):

[0033] In a step 96, the server 6 serves up information over the network 4 to the receiver device 10. The step 96 is performed in response to the receiver device 10 performance of the method 60 (shown in FIG. 3). If the server 6 serves up information formatted as a web page, the receiver device 10 displays the web page and, additionally or alternatively, makes the information available to the agent device 12.

Detail Description Paragraph (20):

[0035] A step 100 indicates that the server 6 can also serve up information to the third party device 14. The third party device 14 can be a plurality of devices that are permitted to access information and provide control signals to the server 6. The information served to the third party device 14 by the server 6 in the step 100 can be a web page or other format. The particular information available to the third party device 14, will, as previously mentioned, be dictated at the server 6 and by the communications channels of the network 4.

Detail Description Paragraph (22):

[0036] Exemplary communications over the network 4, by the server 6 with the provider devices 8a, 8b, the third party device 14, the receiver device 10, and, if applicable, the agent device 12, are web pages in FIGS. 5a-c. Referring to FIGS. 5a-b, in conjunction with FIGS. 1-2 and 4, when a provider device 8a, 8b accesses the server 6 over the network 4, the server 6 transmits to the provider device 8a, 8b for display at the provider device 8a, 8b a series of web pages of the automated data reporting system and method. Examples of the web pages include an access authorization page, such as shown in FIG. 5a; and an information input page, such as shown in FIG. 5b, to which a user of the provider device 8a, 8b can input health related data for maintenance in the database associated with the server 6. Referring to FIG. 5c, in conjunction with FIGS. 1 and 3-4, when a receiver device 10 accesses the server 6 over the network 4, the server 6 transmits to the receiver device 10 for display at the receiver device 10 a different web page of the automated data reporting system and method. In the instance of the server 6 providing reporting of the health related data submitted by the provider devices 8a, 8b, the web page accessed by the receiver device 10 allows input of a request for information regarding the health related data, such as the data itself, statistical analyses of the data, formatted cumulative reporting of the data, or similar information.

CLAIMS:

1. A method for reporting health related data over a communication network, comprising the steps of: accessing a server device of the communication network; providing to a provider device a uniform format for entering the data; receiving the data from the provider device; and storing the data.
3. The method of claim 1, further comprising the step of: providing secured access to the data via the communication network.
4. The method of claim 1, further comprising the step of: preparing reports of the data; and serving up the reports via the communication network to a device capable of receiving the reports over the communication network.
8. The method of claim 1, further comprising the step of: reporting at least a portion of the data to a receiver device over the communication network, wherein the receiver device communicates with the server device over the communication network.
9. The method of claim 1, further comprising the steps of: reporting at least a portion of the data to the provider device over the communication network, wherein the provider device communicates with the server device over the communication network.
11. The method of claim 1, wherein the communication network is selected from the group consisting of the Internet, an extranet, and an intranet.
12. A method for trauma data over a communication network, wherein the communication network is the Internet, comprising the steps of: providing a database, wherein the database serves to relate queries with preprogrammed responses in the form of data entry forms and stores information entered into the data entry form; delivering a query to the database over the communication network; accessing an interactive graphical

interface relevant to the queries; inputting data; and storing the data in the database.

13. The method of claim 12, further comprising the step of: displaying a graphical interface to the database for access over the network, wherein the graphical interface is viewed in the step of accessing and the data is input into the graphical interface in the step of inputting.

14. The method of claim 12, wherein the step of delivering, on the one hand, and the step of accessing and inputting, on the other hand, are performed at geographically remote locations on the communication network.

19. The method of claim 12, wherein the communication network is selected from the group consisting of: the Internet, an extranet, and an intranet.

20. A system for the collection, storage, analysis, and reporting of health related data, comprising: a processor; a memory device coupled to the processor; a communication device coupled to the processor and the memory device, that enables communication via the communication network; a relational database that is stored and updated in the memory device; and an application program that is executed by the processor from the memory device comprising: first code, responsive to a query from a provider device via the communication device that instructs the communication device to send a data entry form to the provider device; second code, responsive to receiving a completed data entry form from the provider device, that stores data from the data entry form into the database; third code, responsive to receiving the completed data entry form from the provider device, that notifies healthcare provider communication device of errors; and fourth code that instructs said communication device to transmit a summary of said data to a receiving agency.

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L15: Entry 5 of 8

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Nov 12, 2002

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TITLE: Integrated calorie management system

Abstract Text (1):

An improved health management system for a person is disclosed, in which the person's resting metabolic rate (RMR) is determined at intervals using an indirect calorimeter. RMR values are used in setting and revising goals in, for example, a weight control program. The effects of a weight control program on RMR can hence be compensated for, which enables an improved weight control program to be developed. In one embodiment, the person is provided with a portable electronic device, for use as a caloric intake calculator, caloric expenditure calculator, and caloric balance calculator.

Brief Summary Text (2):

This invention relates to health management, in particular, to weight control.

Brief Summary Text (14):

In U.S. Pat. No. 5,705,735, Acorn describes monitoring the oxygen consumption and carbon dioxide production of a patient on a ventilator, and using the data to assess nutritional requirements. This apparatus not intended to provide information to the patient, but rather to a health professional in attendance, and is not convenient for use in a weight control program.

Detailed Description Text (12):

Health management software running on computing device 52 receives the metabolic rate data at intervals, caloric intake data relating to diet, and physical activity level data. The software provides goals and feedback to the user in relation to weight goals, which are modified by changing values in the metabolic rate of the user. Diet logging software and activity sensors are known in the art. However, conventional weight control methods do not compensate for changes in the metabolic rate of the user. The overall capabilities of the software may be summarized in the following list: setting up a user identity by entering name and other information; setting of targets and goals based on information gathered from the user during an initial setup process (weight goals, nutrient targets, health goals, and activity plans); entry of food consumption through a food log with a search capability; entry of activity information combined with a search tool (alternatively using data from an activity sensor); feedback to the user regarding the caloric balance and time dependent logging of body measurements such as resting metabolism, body weight, and body fat percentage; reporting on body measurement trends using graphical display capabilities of the computing device or other device such as an interactive television; and reporting on the nutritional balance of food intake.

Detailed Description Text (14):

FIG. 6 shows a schematic illustration of one embodiment of health management software which may run on the computing device 52. At the start of a weight control program assisted by the health management software, the user may enter a set-up procedure in which an identity is established, initial conditions entered, and targets and goals are set. Personal details such as name, e-mail address, birth date or age, gender, and other information such as frame size, and body fat percentage, may be entered into the software. The user then enters weight loss (or weight gain, or weight maintenance goals). The intended rate of weight loss may be entered, or may default to (for example) one pound per week. The user determines their resting metabolic rate using an indirect calorimeter, preferably the Gas Exchange Monitor invented by James R. Mault. The user also enters their lifestyle, sleep time, and typical exercise level into the device. The software then prepares an estimate or preview of the caloric balance for the person, indicating the caloric expenditure through RMR, caloric expenditure through

activity, and caloric intake allowable by consumption. The user may adjust their intended activity level during the course of the weight loss program. The user then selects a customized diet using software on the computing device which allows a preferred distribution of carbohydrate, fat, and protein to be consumed.

Detailed Description Text (15):

During the course of a weight control program, the user enters foods consumed into the software. The food database accessed by the software preferably includes broad categories of food such as meat, vegetables, beverages, etc. and detailed subcategories related to the specific food items and their weight or volumes. Preferably, the food database resides on memory within the computing device 52. The food database may be created or enhanced using data received over a communications network, data received using a cable or wireless link to another device, or by transfer of memory modules. The computing device 52 may be supplied to customers by a weight control business with a food database pre-installed. The software may provide advice on future diet planning, for example suggesting lists of alternative foods which assist the user in achieving a weight loss goal. Activity levels may also be entered through a menu system. The computing device 52 preferably displays information related to the user's caloric and nutritional intakes, and displays trends, caloric balance, and other information relation to goals of the weight loss program.

Detailed Description Text (17):

By way of illustration, FIGS. 7-12 show a number of example screens which may be shown on the display 54 of computing device 52, provided by health management software running on device 52. FIG. 7 shows two screens in which personal data and starting body parameters may be entered. FIG. 7A shows a personal data entry screen, FIG. 7B shows a starting data entry screen.

Detailed Description Text (31):

Caloric data is received by health management software on computing device 52. Device 52 may be connected to a communications network 70, such as the Internet. In the embodiment that computing device 52 is a PDA, the PDA preferably has a wireless connection to the Internet. The PDA may also be docked or otherwise brought into communications with another device having a link to the communications network. For example, the PDA may be docked with a desktop personal computer having Internet access.

Detailed Description Text (32):

Data collected by device 52, related to the health and weight status of the user, may be transmitted via communications network 70 to a remote computer system (for example, a server system) 80. Remote computer system 80 comprises memory for storing information related to the user on a database. Remote system 80 may also have software for provision of feedback to the user. For example, a computer expert system may be used to provide feedback to the user. The user or other authorized person may access information on the database related to the user, for example through an Internet website. For example, information related to the user may be accessed by a physician, dietician, nutritionist, fitness adviser, physician, other health professional, or other lifestyle expert. A physician may use a personal computer 82 linked to the remote computer system 80 (possibly through communications network 70). In another example, a nutritionist may access the database of foods consumed by the user and weight trends, and provide feedback to the user in terms of foods to avoid and alternatives to previously consumed items of poor nutritional value. A weight control or health management business may provide computing devices such as 52 to multiple users, and have the multiple users communicate data relating to their health or weight management programs to one or more remote computer systems (such as Web servers), so that an employee of the business or other authorized person may access data of multiple users.

Detailed Description Text (33):

A weight control business may provide personal digital assistants, or software customized to run on personal digital assistants, to a large number of consumers. The weight loss business may provide an interactive website accessible through a communications network such as the Internet. The website may be used by the consumers for the storage, display, and analysis of data collected. The collected data may also be used to monitor trends amongst the consumer base, hence enabling the improvement of advice given to any individual consumer.

Detailed Description Text (35):

FIG. 16 shows a system embodiment by which improved feedback may be provided to the user. Computing device 52 is used to collect information regarding the user, such as

metabolic rate, diet log, activity levels, and physiological parameters, as described above. We will refer to this collectively as lifestyle information. Lifestyle information is stored within a database on remote computer system (for example, a server system) 80. Lifestyle data is transmitted from computing device 52 to computer system 80 through communications network 70, preferably the Internet. The computer system 80 analyzes the lifestyle data and determines appropriate feedback. The feedback is provided either by computer system 80, or by another feedback provider 90.

Detailed Description Text (37):

The computing device 52 may also be used to transmit weight control related data to the interactive television or other device connected to communications network 70 by any convenient means. The Bluetooth protocol may be used for all short range communications and data transfer described in this specification. IR beams, cables, optical methods, memory module transfer, electrical interfaces, and ultrasound may also be used. In embodiments in which the computing device 52 is a PDA or other hand-held device, it may also be used as a remote control to control entertainment devices.

Detailed Description Text (40):

The remote server 80 preferably has an application program for receiving, storing, displaying and analyzing the information from the PDA relative to the user's physiological status, activities, and consumption. The information may be transmitted at intervals to health care professionals overseeing the weight loss program such as nutritionists, physicians and the like. Based on communications from the health care professionals to the website, and/or analysis performed on the website, messages could be transmitted by the server via the communications network to the PDA for display by the PDA to the patient. The messages could deal with the patient's program and could include messages as to modifications in the patient's conduct, including tests to be conducted or intervals for such tests, and information related to food consumption. The messages may include encouragement or criticism of past results. The system provides regular oversight which is highly successful in other commercial weight loss programs. The patient's response is enhanced by the knowledge that their progress will be communicated either to a health professional or to a computer program overseeing their progress. The computing device 52 may also receive information on the user's state of mind, for example relative to their happiness with the plan's diet and feelings of success of the program.

Detailed Description Text (44):

FIG. 17 shows a wrist-mounted device, which may be used as the computing device 52 in one embodiment of the present invention. This has been described more fully in pending U.S. provisional application Ser. No. 60/207,051, the contents of which are incorporated in its entirety by reference. A person wears the wrist-mounted device, shown generally at 100, which resembles a watch. The device has main housing 102, and strap 104 to place around the user's wrist. A display 106 is used to show time, caloric balance, a diet input menu screen, an activity input menu screen, and an RMR input screen. A mode button 108 is used to change display mode. Buttons 110, 112, and 114 may be used to navigate through menu option choices, and select data items to record. The caloric balance for a person is related to the caloric intake compared with the caloric expenditure as previously described. Bar codes on prepackaged foods may be read by a bar code reader 116 associated with the housing 102 of the wrist-mounted device, and bar code data converted to nutrition data using a database. If a person is eating prepackaged foods from a limited selection, for example, meals supplied as part of a weight control program, the database relating bar code data to nutrition information may be conveniently stored within memory within the housing of the wrist-mounted device. An enhanced database may be stored on a remote server in communication with the wrist mounted device through a communications network.

CLAIMS:

5. The method according to claim 1, further including the step of establishing a health management goal and using the caloric intake, the activity level, and the caloric expenditure to measure progress towards the goal.

7. The method according to claim 1, further including the step of transmitting data related to food consumption and activity performance to a remote location, analyzing the transmitted data in measuring progress towards a health management goal, and providing feedback to the user regarding the progress towards the health management goal.

12. A method of managing the health of a user, said method comprising the steps of:

establishing a health management goal by the user; determining at intervals the resting metabolic rate of the user using an indirect calorimeter; wherein the interval for determining the resting metabolic rate of the user is adjusted based on changes in the user's resting metabolic rate over time; transmitting a signal representative of the user's metabolic rate to a computing device operatively in communication with the indirect calorimeter, wherein the computing device includes a processor, a memory, an input mechanism, and a display; providing data indicative of food consumed by the user over a predetermined period of time to the computing device; providing data indicative of activities performed by the user over the predetermined period of time to the computing device; using the food consumption data to determine caloric intake; using the activity data, caloric intake and the resting metabolic rate to determine a caloric expenditure of the user over the predetermined period of time; using the caloric intake, the activity level, and the caloric expenditure to measure progress towards the goal by the user; and providing the user with their caloric intake, activity level, caloric expenditure and progress towards the goal on the display of the computing device.

17. The method according to claim 12, further including the step of transmitting data related to food consumption and activity performance to a remote location, analyzing the transmitted data in measuring progress towards a health management goal, and providing feedback to the user regarding the progress towards the health management goal.

21. A health management system for a user comprising; an indirect calorimeter for determining the resting metabolic rate of the user at an interval, wherein the interval is adjusted based on changes in the user's resting metabolic rate; and a computing device operatively in communication with the indirect calorimeter that receives the user's resting metabolic rate, receives food intake by the user over a predetermined period of time and determines caloric intake, receives activities performed by the user over the predetermined period of time, correlates the user's resting metabolic rate, caloric intake and activity level to determine the user's caloric expenditure, and determines the user's caloric balance from the caloric intake and the caloric expenditure, wherein the computing device includes an input mechanism, a memory, a processor, and a display.

25. The system according to claim 21 wherein the user uses the input mechanism to provide a health management goal that is maintained in the memory of the computing device.

27. The system according to claim 21 wherein a health management software program in the memory of the computing device uses the metabolic rate data, caloric intake data and physical activity level data to provide the user information relating to the user's progress towards a predetermined health management goal.

28. The system according to claim 21 wherein the health management software modifies the goal set by the user based on changes in at least one of the metabolic rate, caloric balance, progress towards the goal, activity level or caloric intake of the user.

29. The system according to claim 21, wherein the health management software modifies the interval for measuring the resting metabolic rate of the user based on changes in the metabolic rate of the user over time.

35. The system as set forth in claim 21, further comprising a means for transmitting data related to food intake and activity level to a remote location that analyzes the transmitted data for measuring progress towards the health management goal, and provides feedback to the user regarding the progress towards the health management goal.

37. A system of health management for a user comprising: means for measuring resting metabolic rate of the user by indirect calorimetry at intervals; means for transmitting a first signal representative of resting metabolic rate to a means for receiving said first signal of resting metabolic rate; means for receiving a second signal representative of food consumed by the user over a predetermined period of time; means for determining caloric intake from said second signal of food consumed; means for receiving a third signal representative of activity level of the user for the predetermined period of time; means for determining a caloric expenditure for the predetermined period of time from the first signal of resting metabolic rate, caloric intake and third signal of activity level; means for displaying the caloric expenditure

to the user; and means responsive to the caloric expenditure for adjusting the interval for measuring resting metabolic rate based on changes in the user's resting metabolic rate over time and transmitting the adjusted interval to the user.

43. The system according to claim 37 further comprising a means for providing the user access to a remote computer system through a communications network so as to allow the person to communicate with the remote computer through the communications network, so that at least the user may view data relating to their health management plan stored on the remote computer system through the communications network.

47. The system as set forth in claim 46, further comprising a means for receiving a health management goal from the user, and a means for comparing the goal to the caloric balance to determine progress toward the goal.

48. The system as set forth in claim 37 further comprising a means for transmitting data related to food intake and activity level to a remote location that analyzes the transmitted data in measuring progress towards the health management goal, and provides feedback to the user regarding the progress towards the health management goal.